

IN THE CLAIMS

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1. (Currently Amended) A method for generating recommendations, comprising:

providing an item of a particular type to a handheld device having an application for engaging in a repetitive activity with items of the particular type, wherein the repetitive activity comprises displaying or playing items of the particular type to a user;

generating a history of user interaction with the provided item, wherein a user interaction comprises an instance of a user causing the application to display or play the provided item to the user and duration of the display or play, wherein each user interaction occurs during standalone operation of the handheld device disconnected from a network;

uploading the history of user interactions to a network recommender;

transforming the history into an implicit rating of the provided item, wherein the history of user interactions with the provided item may be used to create more accurate statistical profiles the rating comprising predicted ratings for a user for a plurality of items not rated by the user, having a measure of confidence in the prediction and a rationale for the prediction; and

using the implicit rating of the provided item to generate recommendations of other items of the particular type.

2. (Original) The method of claim 1, wherein the device is selected from the group consisting of a personal digital assistant, an audio player, and an electronic document viewer.

3. (Original) The method of claim 1, wherein the history of user interactions is transformed into recency and frequency of interaction data pertaining to the provided item.

4. (Original) The method of claim 3, wherein an implicit rating is generated in accordance with the relationship:

$$\text{rating}(\text{item}) = \text{number of interactions}(\text{item}) \text{ since datetime}(\text{item acquired}) / \text{number of total interactions}(\text{item}) \text{ since datetime}(\text{item acquired}).$$

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5. (Original) The method of claim 1, wherein the history of user interactions is transformed into data pertaining to normalized time spent interacting with the provided item.

6. (Original) The method of claim 5, wherein an implicit rating is generated in accordance with the relationship: $\text{rating}(\text{item}) = \text{total interaction time}(\text{item}) / \text{size}(\text{item})$.

7. (Original) The method of claim 5, wherein an implicit rating is generated in accordance with the relationship:

$\text{rating}(\text{item}) = [\text{total interaction time}(\text{item}) / \text{size}(\text{item}) * \exp(-\text{damping coefficient}) * (\text{date-time acquired})]$.

8. (Original) The method of claim 1, wherein the history of user interactions is transformed into binary classification data comprising an interaction and no interaction.

9. (Original) The method of claim 1, further comprising providing a user profile for a user associated with the device and modifying the user profile based on the history.

10. (Currently Amended) A method for generating recommendations, comprising:
providing a plurality of items of a particular type to a plurality of handheld devices, each device having an application for engaging in a repetitive activity with items of the particular type, wherein the repetitive activity comprises displaying or playing items of the particular type to a user;

generating for each provided item in each device, a history of user interaction with the provided item, wherein a user interaction comprises a user causing the application to display or play the provided item to the user and duration of the display or play, wherein each user interaction occurs during standalone operation of the handheld device disconnected from a network;

uploading the history of user interactions to a network recommender;

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transforming the history for each provided item into an implicit rating of the provided item, wherein the history of user interactions with the provided item may be used to create more accurate statistical profiles, the rating comprising predicted ratings for a user for a plurality of items not rated by the user, having a measure of confidence in the prediction and a rationale for the prediction; and

using the implicit ratings of the provided items to generate recommendations of other items of the particular type.

11. (Original) The method of claim 10, wherein the items comprise music tracks, the devices comprise audio players and the history of user interaction comprises a record of track identifier and time spent listening.

C 12. (Original) The method of claim 10, wherein the items comprise electronic books, the devices comprise electronic book viewers and the history of user interaction comprises a record of book identifier and normalized time spent reading.

13. (Currently Amended) A system for providing recommendations, comprising:
a plurality of devices, each device having an application for engaging in a repetitive activity with items of the particular type, wherein the repetitive activity comprises displaying or playing items of a particular type to a user, and a memory for storing a history of each user interaction with an item of the particular type with the device, wherein a user interaction comprises a user causing the application to display or play a selected item to the user and duration of the display or play and wherein each user interaction occurs during standalone operation of the handheld device disconnected from a network; and

a recommendation service for storing downloaded histories of items interacted with from the plurality of handheld devices, for transforming the downloaded histories into implicit ratings of the items interacted with, wherein the history of user interactions with the provided item may be used to create more accurate statistical profiles, and for generating recommendations of new items of the particular type based on the implicit ratings, the ratings comprising predicted

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ratings for a user for a plurality of items not rated by the user, having a measure of confidence in the prediction and a rationale for the prediction.

14. (Original) The system of claim 13, wherein the recommendation service further stores downloaded user profiles from participating users on the system.

15. (Original) The system of claim 14, wherein the recommendation service generates recommendations to participating users based on the participating user's profile and the implicit ratings.

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16. (Original) The system of claim 13, wherein the recommendation service generates implicit ratings from the histories of user interactions based on binary classifications.

17. (Original) The system of claim 16, wherein the binary classification comprises accessing and not accessing an item.

18. (Original) The system of claim 13, wherein the recommendation service generates implicit ratings from the histories of user interactions based on recency and frequency of interaction with the items.

19. (Original) The system of claim 13, wherein the recommendation service generates implicit ratings from the histories of user interactions based on normalized time spent interacting with the items.

20. (Original) The system of claim 13, wherein the devices are selected from the group consisting of personal digital assistants, audio players and electronic document viewers.